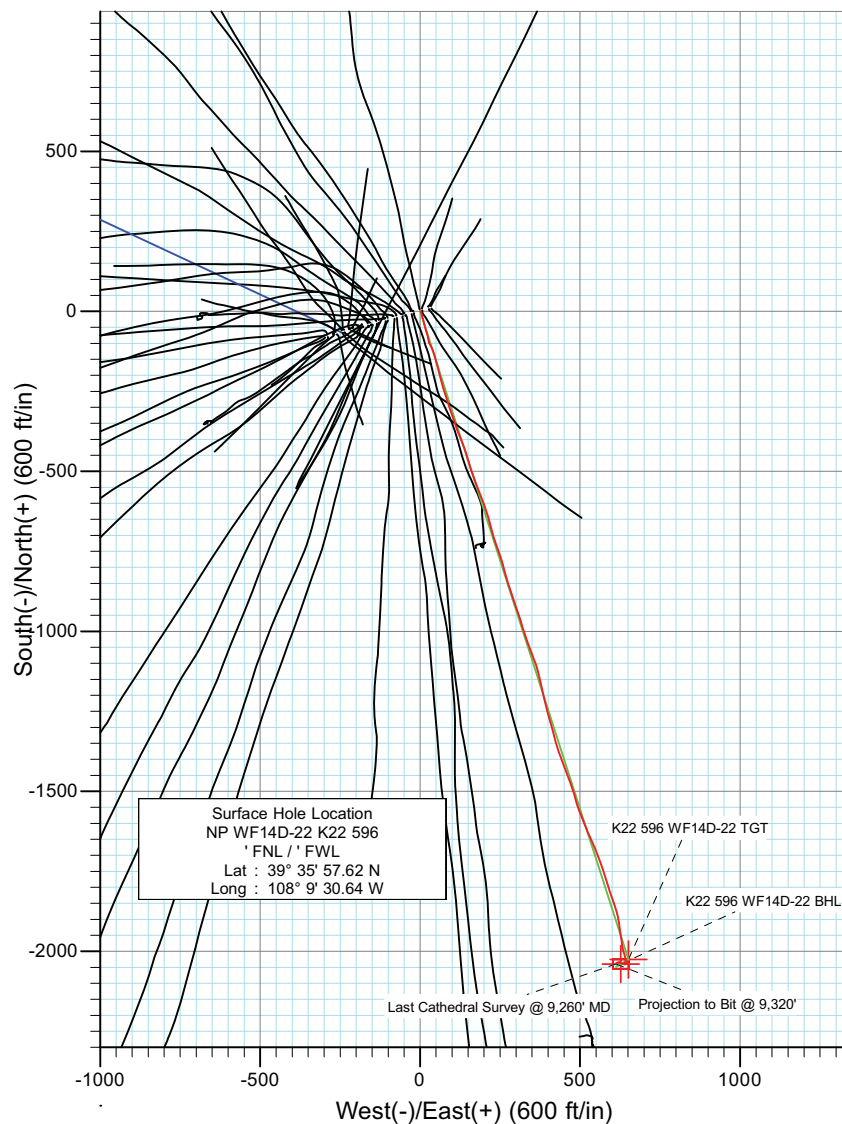
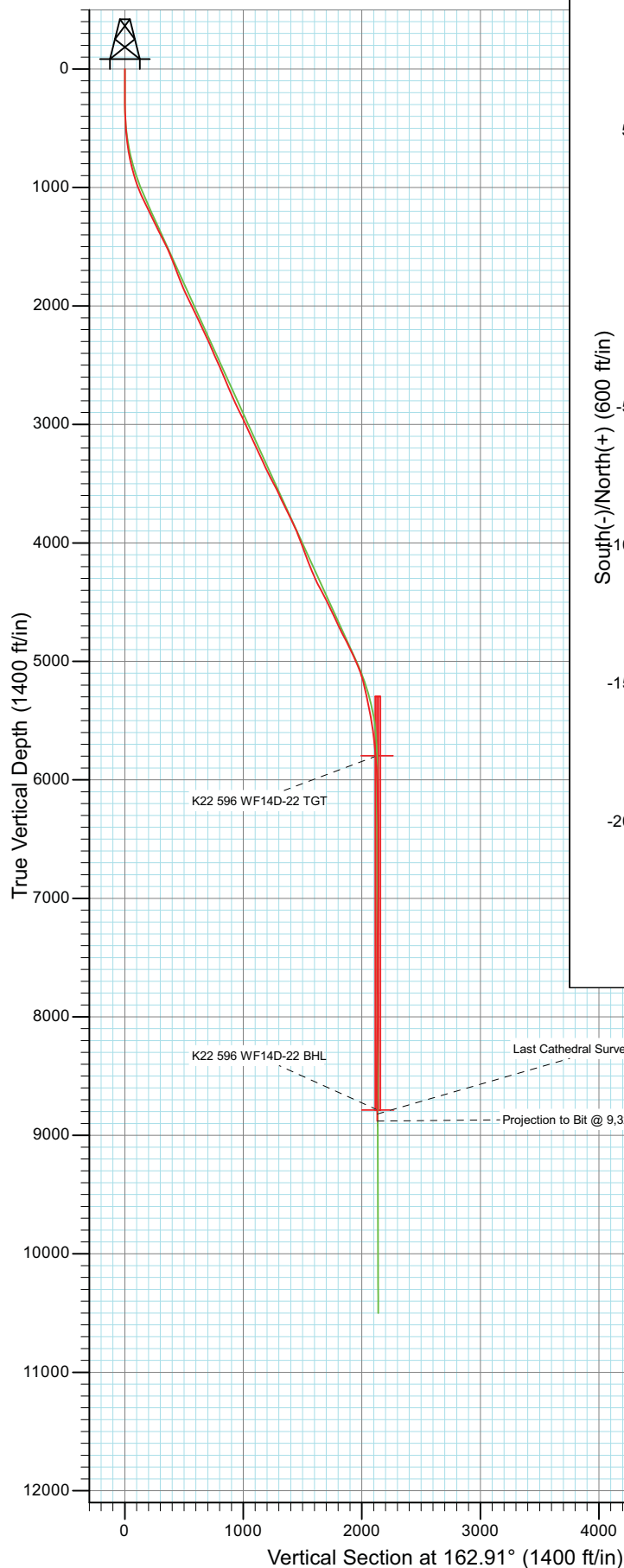




Project: North Piceance
 Site: K22 596 Pad (S22-T5S-R96W)
 Well: NP WF14D-22 K22 596
 Wellbore: DD
 Design: FINAL



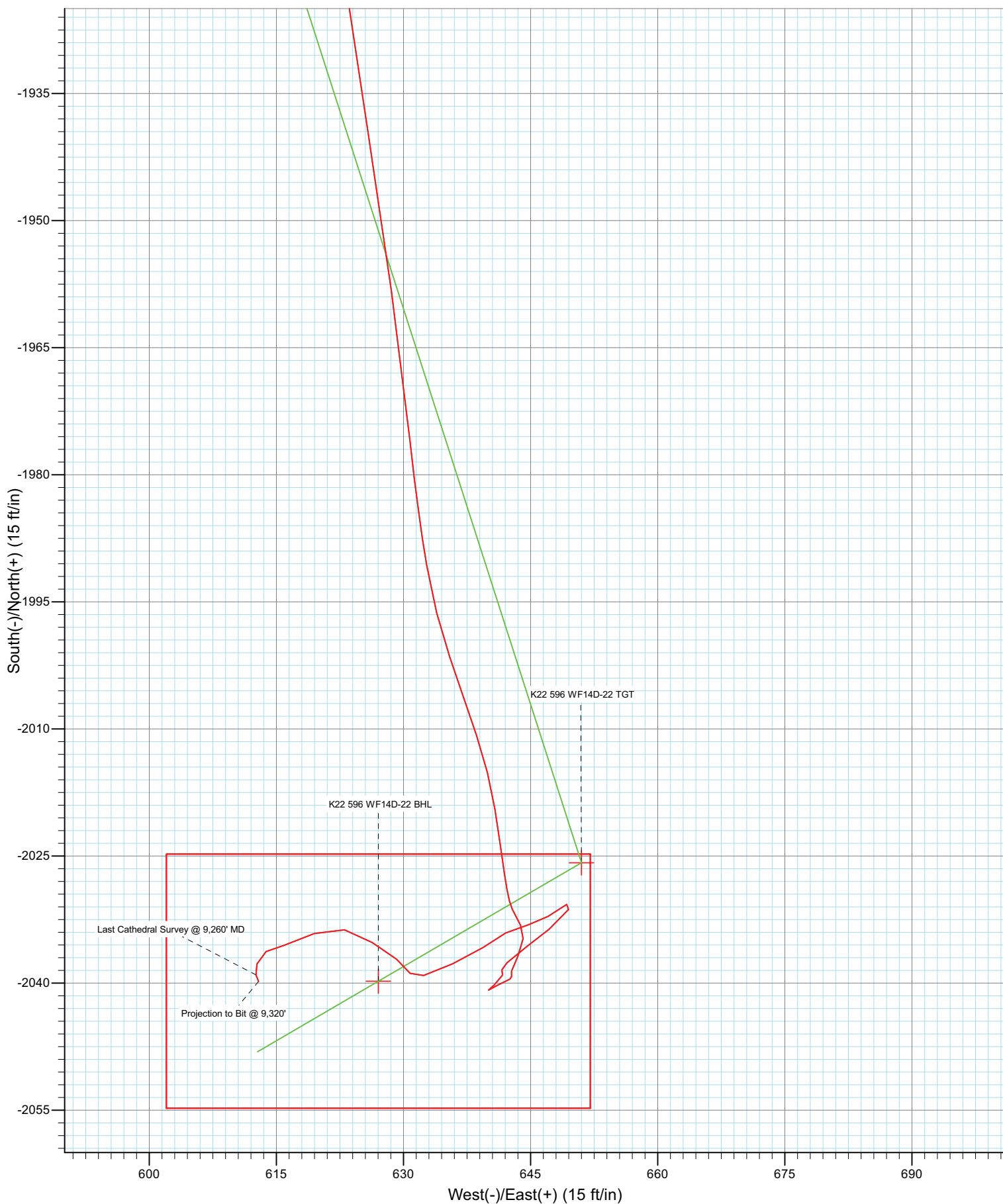
Azimuths to True North
 Magnetic North: 10.53°

Magnetic Field
 Strength: 52354.6nT
 Dip Angle: 65.81°
 Date: 9/20/2010
 Model: IGRF2010

DD NP WF14D-22 K22 596 105330; 105400; LR							
WF14D-22 K22 596 @ 6549.0ft (Patterson 303) North American Datum 1983 Well NP WF14D-22 K22 596, True North							
Type	Target	Azimuth	Origin	Type	N/S	E/W	From TVD
Target	K22 596 WF14D-22 BHL	162.91		Slot	0.0	0.0	0.0
Name	TV	+N/-S	+E/-W	Latitude	Longitude		
K22 596 WF14D-22 BHL	8787.0	-2039.8	627.0	39° 35' 37.46 N	108° 9' 22.63 W		



Project: North Piceance
Site: K22 596 Pad (S22-T5S-R96W)
Well: NP WF14D-22 K22 596
Wellbore: DD
Design: DD



Cathedral Energy

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well NP WF14D-22 K22 596
Project:	North Piceance	TVD Reference:	WF14D-22 K22 596 @ 6549.0ft (Patterson 303)
Site:	K22 596 Pad (S22-T5S-R96W)	MD Reference:	WF14D-22 K22 596 @ 6549.0ft (Patterson 303)
Well:	NP WF14D-22 K22 596	North Reference:	True
Wellbore:	DD	Survey Calculation Method:	Minimum Curvature
Design:	DD	Database:	EDM 5000.1 US Multi Users DB

Project	North Piceance		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Central Zone		

Site		K22 596 Pad (S22-T5S-R96W)			
Site Position:		Northing:	1,654,096.85 ft	Latitude:	39° 35' 57.02 N
From:	Lat/Long	Easting:	2,250,762.90 ft	Longitude:	108° 9' 33.39 W
Position Uncertainty:	0.0 ft	Slot Radius:	0.000 in	Grid Convergence:	-1.68 °

Well	NP WF14D-22 K22 596					
Well Position	+N/-S	0.0 ft	Northing:	1,654,151.29 ft	Latitude:	39° 35' 57.62 N
	+E/-W	0.0 ft	Easting:	2,250,979.84 ft	Longitude:	108° 9' 30.64 W
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	6,527.0 ft

Wellbore	DD				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	9/20/2010	10.53	65.81	52,355

Design	DD				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction	
	(ft)	(ft)	(ft)	(°)	
	0.0	0.0	0.0	162.91	

Survey Program	Date	9/28/2010			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
193.0	9,320.0	Survey #1 (DD)	MWD	Geolink MWD	

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Formations / Comments	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00		
193.0	0.80	75.20	193.0	0.3	1.3	0.1	0.41	0.41		
224.0	0.90	122.20	224.0	0.3	1.7	0.2	2.21	0.32		
254.0	0.50	143.60	254.0	0.0	2.0	0.5	1.57	-1.33		
284.0	0.60	133.60	284.0	-0.2	2.2	0.8	0.46	0.33		
314.0	1.00	122.30	314.0	-0.4	2.5	1.1	1.43	1.33		
344.0	1.70	156.00	344.0	-1.0	2.9	1.8	3.43	2.33		
375.0	2.40	164.70	375.0	-2.0	3.3	2.9	2.46	2.26		
405.0	2.80	169.20	404.9	-3.3	3.6	4.2	1.50	1.33		
435.0	3.20	169.00	434.9	-4.9	3.9	5.8	1.33	1.33		
466.0	2.90	161.60	465.8	-6.5	4.3	7.5	1.59	-0.97		
496.0	3.10	168.60	495.8	-8.0	4.7	9.0	1.39	0.67		
545.0	4.70	165.20	544.7	-11.2	5.5	12.3	3.30	3.27		

Cathedral Energy

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well NP WF14D-22 K22 596
Project:	North Piceance	TVD Reference:	WF14D-22 K22 596 @ 6549.0ft (Patterson 303)
Site:	K22 596 Pad (S22-T5S-R96W)	MD Reference:	WF14D-22 K22 596 @ 6549.0ft (Patterson 303)
Well:	NP WF14D-22 K22 596	North Reference:	True
Wellbore:	DD	Survey Calculation Method:	Minimum Curvature
Design:	DD	Database:	EDM 5000.1 US Multi Users DB

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Formations / Comments
591.0	6.20	167.10	590.5	-15.5	6.5	16.7	3.28	3.26	
636.0	7.90	162.10	635.1	-20.8	8.0	22.2	4.01	3.78	
682.0	9.20	165.10	680.6	-27.3	9.9	29.1	2.99	2.83	
728.0	10.80	166.20	725.9	-35.1	11.9	37.0	3.50	3.48	
774.0	12.30	168.00	771.0	-44.1	13.9	46.2	3.35	3.26	
819.0	13.60	163.70	814.8	-53.8	16.4	56.3	3.59	2.89	
865.0	14.90	161.00	859.4	-64.6	19.9	67.6	3.17	2.83	
911.0	16.80	166.10	903.7	-76.7	23.4	80.2	5.12	4.13	
957.0	18.30	171.80	947.5	-90.3	26.0	93.9	4.96	3.26	
1,002.0	20.80	150.90	990.0	-104.3	30.9	108.7	16.40	5.56	
1,048.0	22.30	156.60	1,032.8	-119.4	38.4	125.4	5.60	3.26	
1,094.0	23.90	164.20	1,075.1	-136.4	44.4	143.4	7.35	3.48	
1,139.0	25.90	163.70	1,115.9	-154.6	49.6	162.3	4.47	4.44	
1,185.0	26.60	165.10	1,157.2	-174.2	55.1	182.7	2.03	1.52	
1,231.0	26.20	166.00	1,198.4	-194.0	60.2	203.1	1.23	-0.87	
1,322.0	25.80	164.30	1,280.2	-232.6	70.4	243.0	0.93	-0.44	
1,414.0	26.90	162.20	1,362.6	-271.6	82.2	283.8	1.57	1.20	
1,506.0	26.30	160.80	1,444.9	-310.7	95.2	325.0	0.94	-0.65	
1,597.0	24.20	161.30	1,527.2	-347.4	107.8	363.8	2.32	-2.31	
1,688.0	22.10	158.30	1,610.8	-381.0	120.2	399.5	2.65	-2.31	
1,700.0	22.00	158.30	1,622.0	-385.2	121.8	404.0	0.83	-0.83	
1,785.0	20.70	160.10	1,701.1	-414.1	132.8	434.9	1.71	-1.53	
1,877.0	20.70	161.00	1,787.2	-444.8	143.7	467.3	0.35	0.00	
1,968.0	24.40	163.80	1,871.2	-478.0	154.1	502.2	4.23	4.07	
2,060.0	26.90	160.10	1,954.2	-515.9	166.5	542.0	3.23	2.72	
2,151.0	25.80	158.80	2,035.7	-553.7	180.7	582.3	1.36	-1.21	
2,243.0	25.00	159.80	2,118.8	-590.6	194.6	621.7	0.99	-0.87	
2,334.0	24.50	161.50	2,201.4	-626.5	207.3	659.8	0.96	-0.55	
2,426.0	25.60	165.00	2,284.8	-663.8	218.5	698.7	2.01	1.20	
2,517.0	22.50	165.00	2,367.9	-699.6	228.1	735.8	3.41	-3.41	
2,609.0	25.10	160.20	2,452.1	-735.0	239.2	772.9	3.52	2.83	
2,700.0	22.50	160.10	2,535.3	-769.6	251.7	809.5	2.86	-2.86	
2,791.0	22.90	167.70	2,619.3	-803.2	261.4	844.6	3.25	0.44	
2,883.0	23.80	160.70	2,703.8	-838.2	271.4	881.0	3.17	0.98	
2,974.0	24.40	162.00	2,786.8	-873.5	283.2	918.1	0.88	0.66	
3,066.0	25.80	162.00	2,870.1	-910.6	295.3	957.1	1.52	1.52	
3,157.0	26.40	161.40	2,951.9	-948.6	307.9	997.2	0.72	0.66	
3,249.0	23.30	163.50	3,035.3	-985.4	319.6	1,035.8	3.50	-3.37	
3,340.0	25.40	160.90	3,118.2	-1,021.1	331.1	1,073.3	2.59	2.31	
3,431.0	25.40	158.70	3,200.5	-1,057.7	344.5	1,112.3	1.04	0.00	
3,523.0	23.80	159.00	3,284.1	-1,093.5	358.4	1,150.5	1.74	-1.74	
3,615.0	25.70	167.10	3,367.7	-1,130.3	369.5	1,188.9	4.22	2.07	
3,706.0	28.00	166.70	3,448.9	-1,170.3	378.8	1,229.9	2.54	2.53	
3,797.0	27.00	167.20	3,529.6	-1,211.2	388.3	1,271.8	1.13	-1.10	
3,889.0	24.80	164.80	3,612.3	-1,250.2	398.0	1,311.9	2.65	-2.39	
3,980.0	25.50	165.00	3,694.7	-1,287.5	408.0	1,350.6	0.77	0.77	
4,072.0	27.00	164.00	3,777.2	-1,326.7	418.9	1,391.3	1.70	1.63	
4,163.0	24.00	164.60	3,859.3	-1,364.5	429.5	1,430.4	3.31	-3.30	
4,255.0	21.80	158.70	3,944.1	-1,398.4	440.7	1,466.2	3.45	-2.39	
4,346.0	19.50	159.30	4,029.2	-1,428.4	452.2	1,498.2	2.54	-2.53	
4,438.0	21.10	158.90	4,115.5	-1,458.2	463.6	1,530.0	1.75	1.74	
4,529.0	21.90	160.80	4,200.2	-1,489.5	475.1	1,563.3	1.17	0.88	
4,621.0	23.80	165.70	4,285.0	-1,523.7	485.3	1,599.0	2.92	2.07	

Cathedral Energy

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well NP WF14D-22 K22 596
Project:	North Piceance	TVD Reference:	WF14D-22 K22 596 @ 6549.0ft (Patterson 303)
Site:	K22 596 Pad (S22-T5S-R96W)	MD Reference:	WF14D-22 K22 596 @ 6549.0ft (Patterson 303)
Well:	NP WF14D-22 K22 596	North Reference:	True
Wellbore:	DD	Survey Calculation Method:	Minimum Curvature
Design:	DD	Database:	EDM 5000.1 US Multi Users DB

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Formations / Comments
4,712.0	27.10	158.60	4,367.2	-1,560.8	497.4	1,638.1	4.93	3.63	
4,804.0	28.70	158.40	4,448.5	-1,600.9	513.2	1,681.0	1.74	1.74	
4,895.0	26.10	155.90	4,529.2	-1,639.5	529.4	1,722.6	3.12	-2.86	
4,987.0	25.00	157.00	4,612.2	-1,675.8	545.3	1,762.1	1.30	-1.20	
5,078.0	24.90	159.70	4,694.8	-1,711.5	559.4	1,800.3	1.26	-0.11	
5,170.0	28.20	162.00	4,777.0	-1,750.3	572.9	1,841.4	3.76	3.59	
5,261.0	26.30	162.10	4,857.9	-1,790.0	585.7	1,883.1	2.09	-2.09	
5,353.0	25.20	161.90	4,940.8	-1,828.0	598.1	1,923.0	1.20	-1.20	
5,444.0	23.40	161.40	5,023.7	-1,863.5	609.9	1,960.5	1.99	-1.98	
5,536.0	18.10	168.70	5,109.8	-1,894.9	618.5	1,993.0	6.40	-5.76	
5,627.0	13.70	171.90	5,197.3	-1,919.4	622.8	2,017.7	4.93	-4.84	
5,719.0	12.10	171.00	5,286.9	-1,939.7	625.8	2,038.0	1.75	-1.74	
5,810.0	11.60	172.20	5,376.0	-1,958.2	628.6	2,056.5	0.61	-0.55	
5,902.0	11.10	173.70	5,466.2	-1,976.2	630.8	2,074.3	0.63	-0.54	
5,993.0	7.40	170.30	5,556.0	-1,990.7	632.7	2,088.7	4.11	-4.07	
6,085.0	6.50	160.90	5,647.3	-2,001.4	635.4	2,099.8	1.57	-0.98	
6,176.0	5.90	161.40	5,737.8	-2,010.7	638.6	2,109.6	0.66	-0.66	
6,267.0	5.50	171.10	5,828.3	-2,019.5	640.8	2,118.6	1.14	-0.44	
6,359.0	4.00	172.20	5,920.0	-2,027.0	641.9	2,126.1	1.63	-1.63	
6,450.0	1.50	155.20	6,010.9	-2,031.2	642.8	2,130.5	2.86	-2.75	
6,542.0	1.20	149.90	6,102.9	-2,033.2	643.8	2,132.6	0.35	-0.33	
6,633.0	1.00	193.40	6,193.9	-2,034.8	644.1	2,134.2	0.92	-0.22	
6,725.0	1.70	199.00	6,285.8	-2,036.8	643.5	2,136.0	0.77	0.76	
6,816.0	0.70	210.90	6,376.8	-2,038.6	642.8	2,137.5	1.13	-1.10	
6,908.0	0.40	119.50	6,468.8	-2,039.2	642.7	2,138.1	0.89	-0.33	
6,999.0	0.60	255.20	6,559.8	-2,039.5	642.6	2,138.3	1.02	0.22	
7,091.0	1.40	238.30	6,651.8	-2,040.2	641.1	2,138.6	0.92	0.87	
7,182.0	0.20	266.20	6,742.8	-2,040.8	640.0	2,138.8	1.35	-1.32	
7,274.0	1.30	53.10	6,834.8	-2,040.2	640.7	2,138.4	1.60	1.20	
7,365.0	0.70	16.20	6,925.8	-2,039.1	641.7	2,137.6	0.94	-0.66	
7,457.0	0.30	286.30	7,017.8	-2,038.4	641.6	2,137.0	0.83	-0.43	
7,548.0	1.40	46.90	7,108.8	-2,037.6	642.2	2,136.4	1.73	1.21	
7,640.0	2.30	52.90	7,200.7	-2,035.7	644.5	2,135.2	1.00	0.98	
7,731.0	2.00	51.20	7,291.6	-2,033.6	647.2	2,134.0	0.34	-0.33	
7,823.0	2.10	38.00	7,383.6	-2,031.3	649.5	2,132.5	0.52	0.11	
7,914.0	1.80	239.70	7,474.6	-2,030.7	649.3	2,131.8	4.21	-0.33	
8,006.0	1.50	234.60	7,566.5	-2,032.1	647.0	2,132.6	0.36	-0.33	
8,097.0	1.70	257.80	7,657.5	-2,033.1	644.7	2,132.8	0.74	0.22	
8,189.0	1.90	243.50	7,749.4	-2,034.1	642.0	2,132.9	0.53	0.22	
8,280.0	2.10	231.40	7,840.4	-2,035.8	639.4	2,133.8	0.51	0.22	
8,371.0	3.10	248.90	7,931.3	-2,037.7	635.8	2,134.6	1.39	1.10	
8,463.0	1.50	246.80	8,023.2	-2,039.1	632.4	2,134.9	1.74	-1.74	
8,554.0	1.10	325.70	8,114.2	-2,038.8	630.8	2,134.2	1.85	-0.44	
8,646.0	1.80	310.20	8,206.2	-2,037.2	629.2	2,132.1	0.87	0.76	
8,737.0	2.60	300.20	8,297.1	-2,035.2	626.3	2,129.4	0.97	0.88	
8,829.0	1.90	287.20	8,389.0	-2,033.7	623.0	2,127.0	0.94	-0.76	
8,920.0	2.90	247.60	8,480.0	-2,034.1	619.5	2,126.4	2.06	1.10	
9,012.0	1.90	250.60	8,571.9	-2,035.5	615.9	2,126.7	1.10	-1.09	
9,103.0	0.90	250.60	8,662.9	-2,036.3	613.8	2,126.7	1.10	-1.10	
9,195.0	1.60	198.50	8,754.8	-2,037.7	612.7	2,127.8	1.38	0.76	
9,260.0	0.80	158.00	8,819.8	-2,039.0	612.6	2,129.0	1.72	-1.23	Last Cathedral Survey @ 9,260' MD Projection to Bit @ 9,320'
9,320.0	0.80	158.00	8,879.8	-2,039.8	612.9	2,129.8	0.00	0.00	

Cathedral Energy

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well NP WF14D-22 K22 596
Project:	North Piceance	TVD Reference:	WF14D-22 K22 596 @ 6549.0ft (Patterson 303)
Site:	K22 596 Pad (S22-T5S-R96W)	MD Reference:	WF14D-22 K22 596 @ 6549.0ft (Patterson 303)
Well:	NP WF14D-22 K22 596	North Reference:	True
Wellbore:	DD	Survey Calculation Method:	Minimum Curvature
Design:	DD	Database:	EDM 5000.1 US Multi Users DB

Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
- Shape									
K22 596 WF14D-22 TG ⁻	0.00	0.00	5,797.0	-2,025.8	651.0	1,652,107.32	2,251,571.29	39° 35' 37.60 N	108° 9' 22.32 W
- survey misses target center by 14.2ft at 6236.7ft MD (5798.1 TVD, -2016.6 N, 640.2 E)									
- Point									
K22 596 WF14D-22 BHI	0.00	0.00	8,787.0	-2,039.8	627.0	1,652,094.04	2,251,546.92	39° 35' 37.46 N	108° 9' 22.63 W
- survey misses target center by 14.6ft at 9227.2ft MD (8787.0 TVD, -2038.5 N, 612.5 E)									
- Rectangle (sides W30.0 H50.0 D0.0)									

Survey Annotations					
Measured Depth	Vertical Depth	Local Coordinates			
(ft)	(ft)	+N/-S (ft)	+E/-W (ft)	Comment	
9,260.0	8,819.8	-2,039.0	612.6	Last Cathedral Survey @ 9,260' MD	
9,320.0	8,879.8	-2,039.8	612.9	Projection to Bit @ 9,320'	

Checked By: _____ Approved By: _____ Date: _____